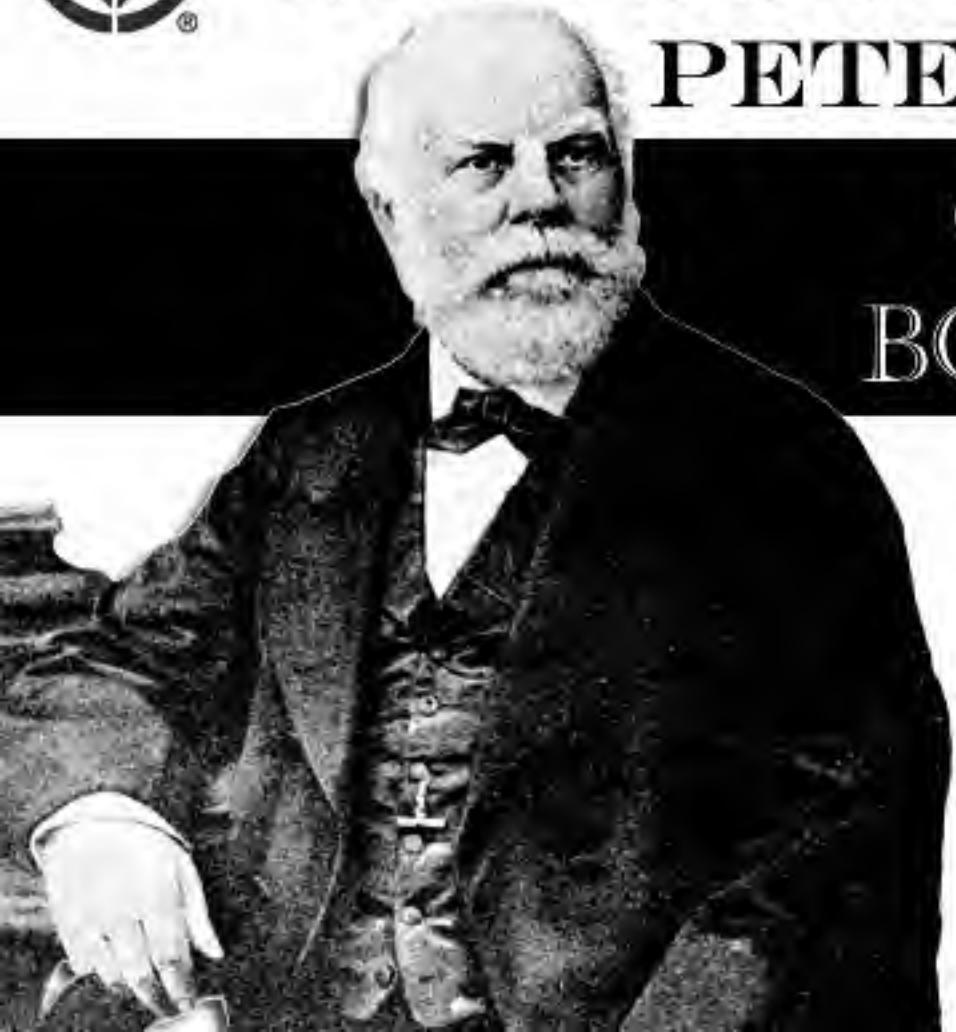





# MISSOURI BOTANICAL GARDEN

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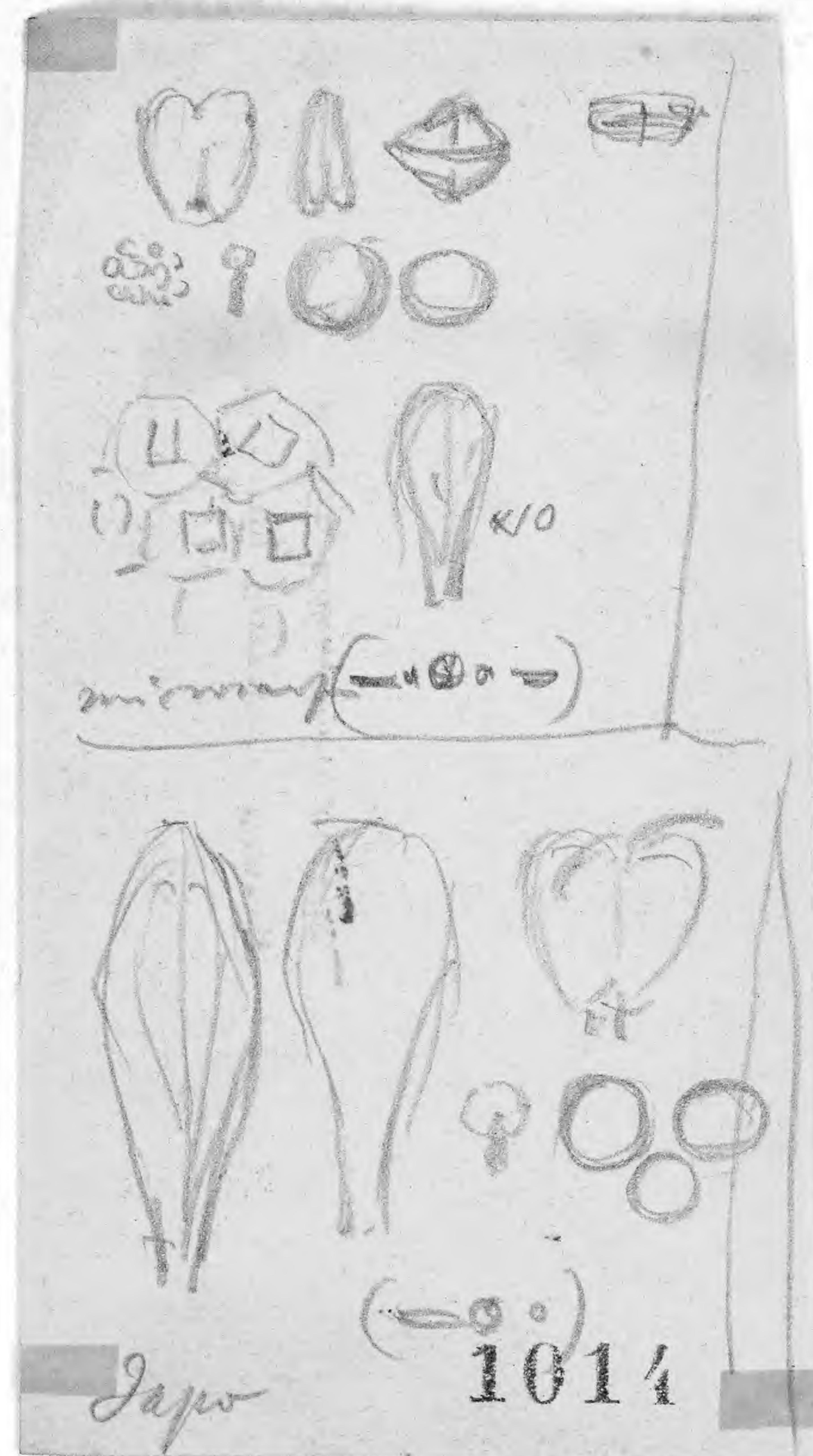


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
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"C. nephroides" Nottall "C. Nottall" form (*C. pedunculosa* Nutt.) are  
south western plants belonging to the first section, the former with scarcely  
gibbosus, the latter with long peduncles fit with ~~an~~ <sup>the</sup> crossed ~~reeds~~  
~~reeds~~,  
sessile,

1016



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1. lot, 2 time 3. notes

1.50. 2 time 3 notes  
largely separated, the others

small broader than high

C. austini Engelm. Found Compacted, deeply seated above & below  
on pedicels of its own length or usually shorter, <sup>lobes of the fruit very</sup>  
narrowly winged; styles shorter than the fruit, divaricate, <sup>deep groove along the</sup> leaves <sup>in</sup> <sup>all</sup> <sup>small</sup>

101

from New York to Illinois and southward, flattened  
autumnal; l. fast large ~~detached~~ <sup>not passed</sup> circular  
deeply and narrowly notched <sup>reside on subsecale</sup>, lobes  
of fruit ~~obtusely~~ <sup>ang</sup> broadly winged, with a very deep and narrow  
groove between them; styles very long, reflexed, downward, leaves all  
leaves from a broader base & notched at the tip. <sup>whose</sup> ~~at~~ tip - squat  
3-6 inches high, leaves 2-5 l. long; pet variable, <sup>1</sup> line or more <sup>2</sup> l. long,  
tip, usually



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Jan 1866

The simplest form of the *Malvaceae*

Launched at

Receptacles visible. Plants smooth, or covered with  
a minute stellate ~~pubescence~~ <sup>scales</sup> visible only and the leaves opposite  
large & pellucide according to old varieties, as in most  
water plants. (Pancaria annua)  
very small uniform

water plants. (Name in annual very small uniform  
land. S. 1. Terrestres small capitate plants with abortive or minute  
Grown with stamens and crowded leaves, without the stellate pubescence, destitute of bracts,  
filaments not elongated after fertilization; first carpels of fruit constrict  
S. 2. Aquatric amphibiae perennials with elongated  
stems, larger floating boats) and linear leaves  
only pubescence, with stamens; flowers (usually only the  
male ones) between apices of bracts; filaments elongated after  
fertilization; carpels of fruit minute, &c. Plants mostly  
on the margins of ponds, almost dry, ~~when~~ <sup>when</sup> winter  
to the terminal ones, on rather submerged soil  
to the next section

93. Submersed ~~Annual~~ submersed perennials with crowded  
uniform linear leaves ~~without~~<sup>without</sup> ~~veins~~<sup>veins</sup> and ~~without~~<sup>without</sup> flowers,  
stomata;



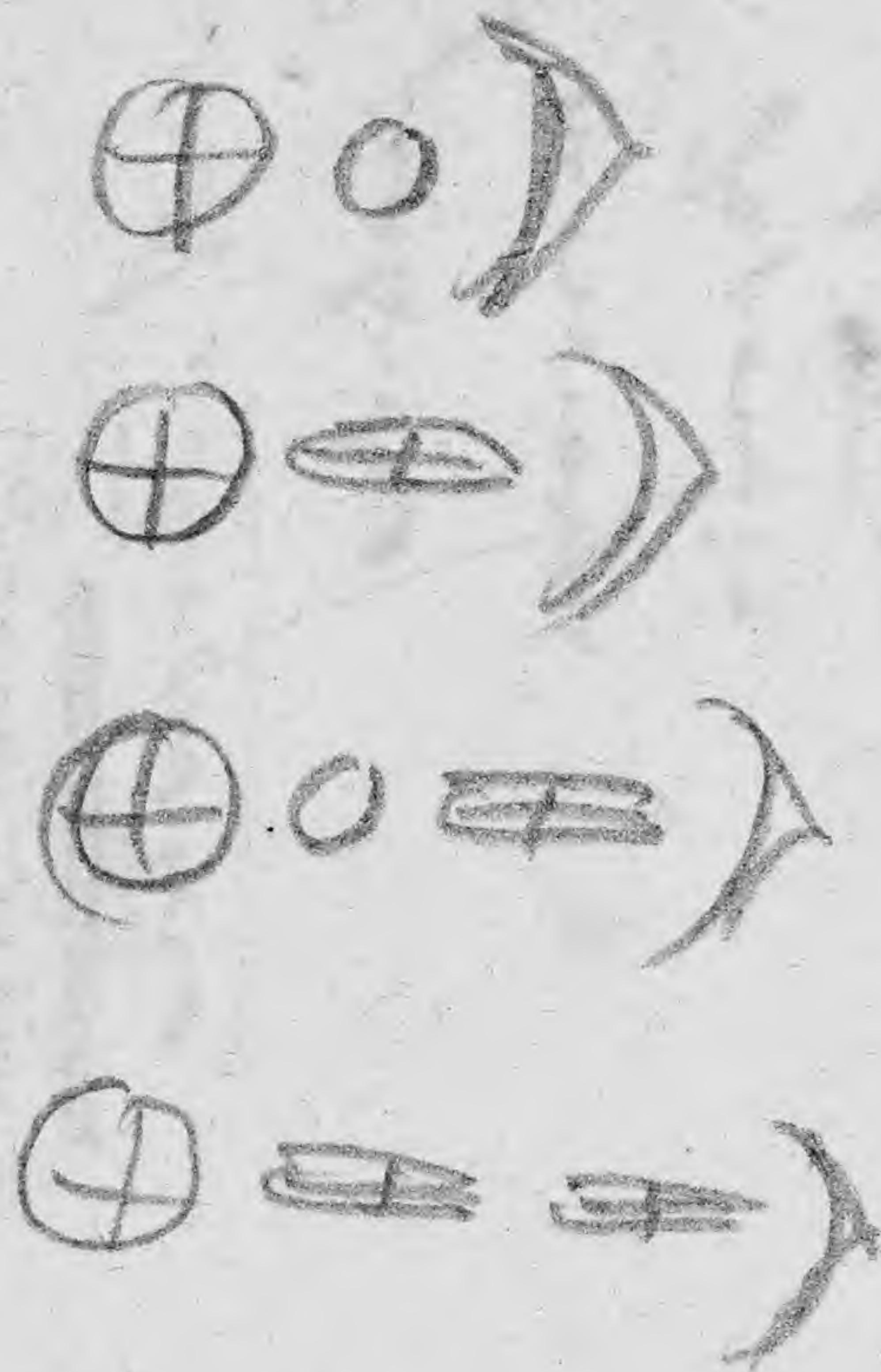
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I have seen



seen to occur  
but not seen by me

$\oplus$  ~~—~~  $\circ$  } rare  
 $\oplus$   $\circ$  ~~—~~  $\circ$  } very rare

1018



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Callitrichia

Jan 13.

A. Tropostors

*C. perfoliata*

*C. microcarpa*

*C. Japonica*

*C. heterotrichia*

*C. diffusa*

*C. marginata*

*C. nuttallii*

*C. macroptera* & *C. cordifolia*

*C. diffusa* *C. cordifolia* 1.03 m

*C.*

B. Aquaticae

*C. oblonga*

*C. Australis*

*C. heteropoda*

*C. pedunculata*

*C. hamata*

*C. stagnalis*

*C. Odontosperma*

*C. verba*

*C. submersa*

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*C. submersa*

*C. Fimbrata*

*C. antinomalis*



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Schematic Diagrams of  
Calostoma



common one



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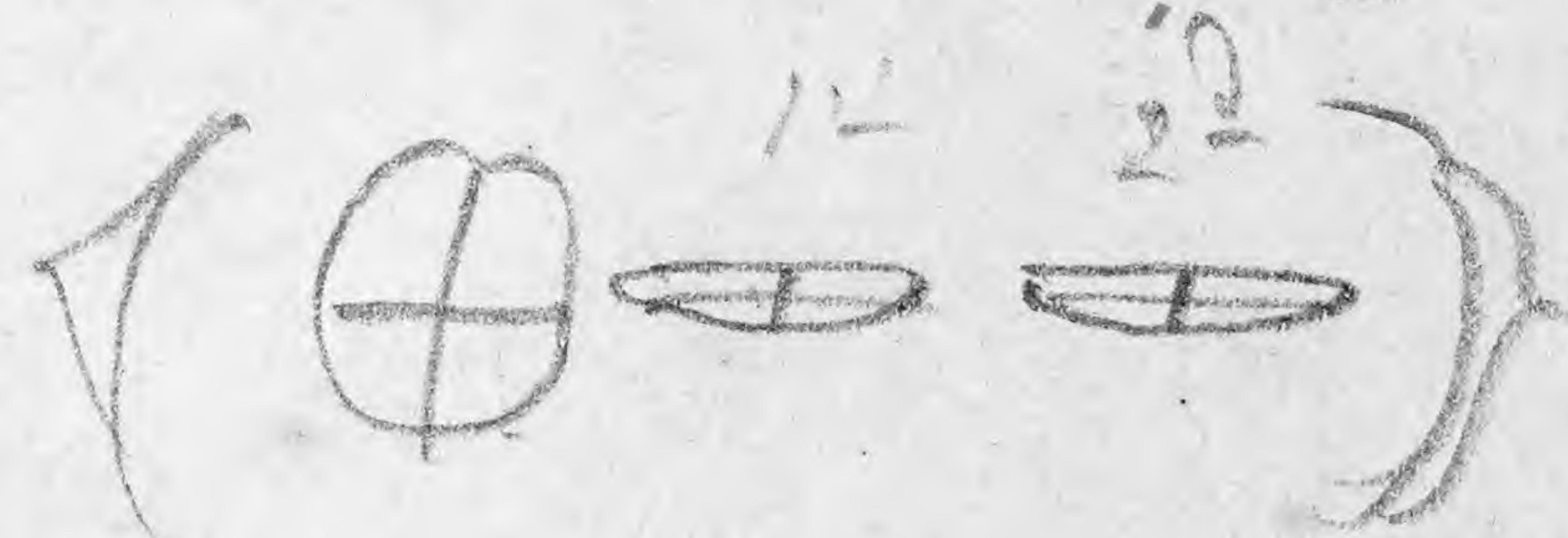
much rarer



common



very rare



"two few flowers"  
whether in this position?

(Yes! seen in C. Verna Engg  
- C. Hill & C. Lovell.)

seen by me in  
C. verna Engg.



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F. Peck March 1865

*Callitricha aquatica* Smith.

Caulebus filiformibus elongatis ramosis, foliis immersis distantibus angusto-lineariis, denseris autem confertis latioribus, floribus monicis.

*B. speculumata*

Folii superioribus  
ovatis, inferioribus  
integerrimis  
cupula acuta tetragona  
pedunculata.

*C. autumnalis*

Folii lanceolato-  
oblongis, ratis-ner-  
vibus apice bidentatis  
immersis linearibus  
pariter apice bidentat-  
is, floribus sessilibus,  
cupula acuta tetra-  
gonis.

*A. verna**C. serrilis* DC.

Foliis ovato-spatulatu-  
ris integris nonnumquam  
superne aggregatis ma-  
joribus, capsula ovali-  
cute tetragona.

*Callitricha pedimentata**Stellaria quo lenticula palustris angustifolia*, folio in apice directi. Vzill.

alpine fluvialis - - - - - Tab.

alpine aquatica minor et fluitans - - - - - Bzill.

*Callitricha autumnalis* - - - - - Iim.*Callitricha serrilis* S. - - - - - DC.*α. vulgaris.*

Folii omnibus  
foliis longisculis  
elongato-obovatis.

Alpine aquis sinuatae  
foliis longisculis - - - Bzill. bist.  
Stellaria quo alpine aquis inna-  
tans foliis longisculis - - - Vzill.  
Callitricha verna - - - - - Pl. dan.

*B. stellata* -

Folii ovato-  
tumidatis, radicis  
antibus.

*Stellaria aquatica* - - - - - Lob.*Foeniculum aquatum*  
stellatum - - - - - Tab.*Callitricha estivalis* - - - - - Thuill.*C. gallicoides* - - - - - Thuill. ined.*C. stellata* - - - - - Hop. Hoffm.*γ. intermedia*

Folii superiori  
tibus ovatis, in-  
terioribus im-  
mersionis linearibus  
apice bidentatis.

*Callitricha intermedia* - - - Schk. Willd.*Cat. Dubia* - - - - - Thuill.*C. heterophylla* - - - Pursh*C. aquatica* - - - - - Bzill.*ε. minima*

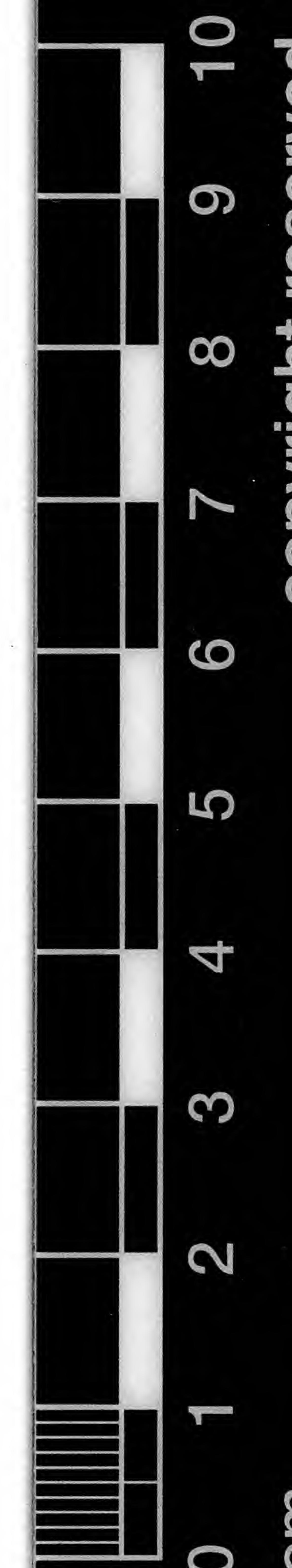
Capitosa, foliis  
minutioribus  
angustioribus  
tenuis et aquo distans

*Callitricha minima* - - - Hop. Hoffm.*C. capitosa* - - - - - Schult.*C. pusilla* - - - - - Thuill. ined.*C. brevifolia* - - - - - Pursh.*C. platycarpa* - - - - - Kutz.*C. terrestris* - - - - - Raf.

*Stellaria aquatica* foliis longis  
temissimis Roi - - - Vzill.

*Callitricha tenuifolia* - - - - - Pursh.*C. gramineum* - - - - - Thuill.*C. linearis* - - - - - Pursh.

*α. tenuifolia*  
foliis omnibus  
linearibus longis  
apice bidentatis.

*Callitricha confervoides*. Thuill.

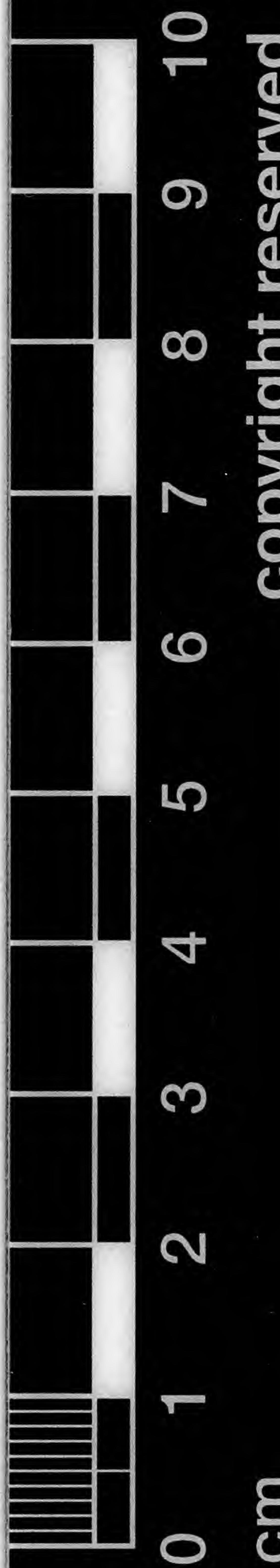
*Clavis of Callitrichis*

*F. Peck 1865*

*(written!)*

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F. Peck March 1865

1021

Chavis analyticus

*Callitrichia aquatica*. Smith

fructibus

sessilibus; foliis superiорibus

pedunculatis

integris plurim  
bus trinerviis

apice bidentatis.

*Callitrichia vernae* —

Folius

inferioribus

linearibus

omnibus linearibus

*Callitrichia autumnalis*

Folius linearibus

*Callitrichia confervoides* Thunb

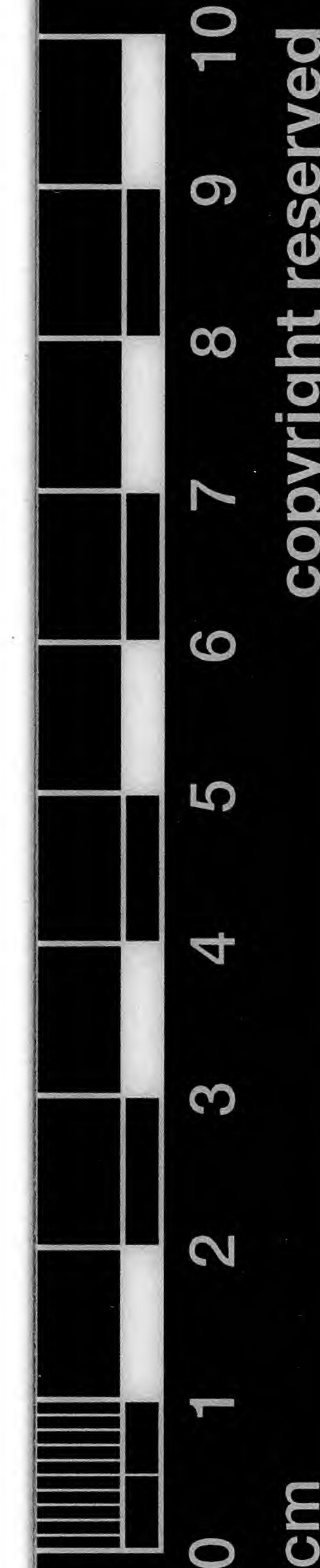
*Callitrichia pedunculata* DC

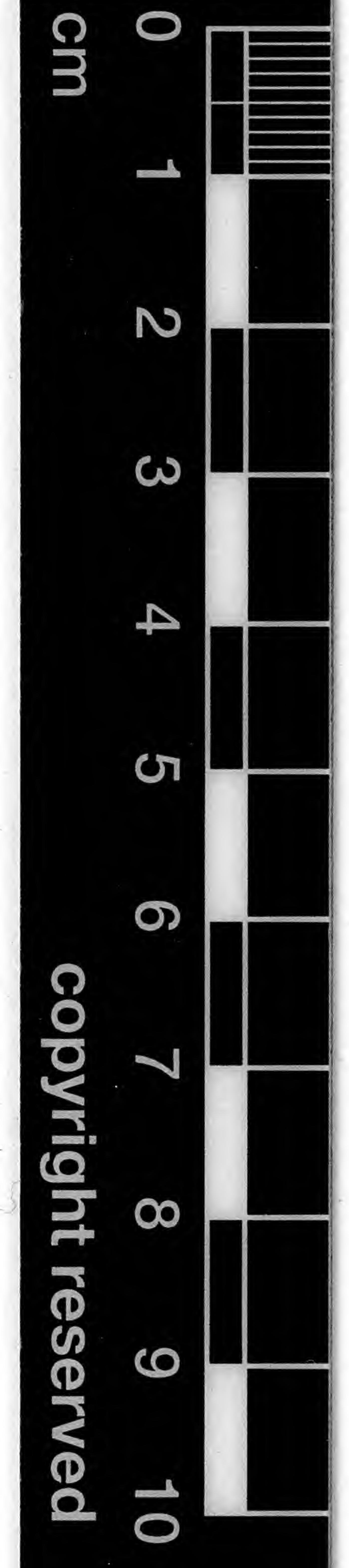
elongato-ovatis vel  
rotundatis — — —

Folius minutis, ovatis, aq[ue] distantibus. *Callitrichia minima*. Hopp.

*Callitrichia intermedia*. Sch.

*Callitrichia tenuifolia*. Pers.





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Specimens of Callitrich received from  
Dr. Engelm. prior to Aug. 6th. 1864.

(1). "Callitrich verna, L. Banks of small lakes &c  
 opposite St. Louis. May 1835"

(2). "C. verna, L. Banks of small streams. Little Rock  
 Ark. July 1835"

(3). "C. verna, L. Chicago May 1848"

(4). "C. vernalis, Kutz.? St. Louis Mo. May 1842  
 Ch. Feyer."

---

(5). C. Engelhardtiana, n. sp. "Memphis Tenn.  
 A. Fendler. 20 May 1851"

(6). C. Engelhardtiana, n. sp. "Fayetteville N. W. Ark.  
 June 1835"

(7). C. peploides Mutt.! "Galveston Island  
 F. Lindheimer 1843"

(8). C. hamulosa, Kutz. Frieden E. Fries leg."

---

(9). "C. autumnalis, L. Berlin Russia"

(10). "C. autumnalis, L. St. Petersburg Russia"

11. "C. Magnifica, scop.  
 Teneriffe Mar. 1855—"

12. C. pedunculosa Frieden

13. C. truncata Lindl.

14. C. Asiatica Toment. Galveston  
 Aug. 6th. 1864 C. T. Austin



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Callitrichae  
arranged according to size of diameter  
of fruit

		Regelmairei Engelm.
<i>C. drummondii</i> <u>An.</u>	0.7 mm	0.7
<i>C. turposa</i> <u>chil.</u>	0.7	0.2-1.4
<i>C. Asa grayi</i> <u>An.</u>	0.7	0.7-0.8
<i>C. deflexa</i> (pedunc.) <u>Engelm.</u>	0.9	0.9-1.3
<i>C. verna</i> <u>Engelm.</u>	1.1	0.7-0.8
<i>C. obtusangula</i> <u>Poly.</u>	1.2	0.8-1.0
<i>C. occidentalis</i> <u>Car.</u>	1.3	
<i>C. pedunculata</i> <u>Car.</u>	1.4	1.2-1.3
<i>C. macroptera</i> <u>Wright</u>	1.4	
<i>C. truncata</i> <u>Gill</u>	1.7	1.1
<i>C. stigmaria</i> <u>Eng.</u>	1.6-1.8	1.3-1.5
<i>C. haemata</i> <u>Eng.</u>	1.6-1.9	1.2
<i>C. antarctica</i> <u>An. B.</u>	1.9	1.5-1.7

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Alex. Leitch,

APOTHECARY & CHEMIST.

Cor. 4<sup>th</sup> & Olive Sts., St. Louis.

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Callitricha terrestris, Raf. in. med. spec. XI. 358

ex Dec. Prod III. 71

foliis omnibus approximatis brevibus oblongis  
obtusis subsucculentis, fructibus sessilibus  
latis brevibus emarginatis. ① in pedestribus  
et ad margines rivo rum Auenae Comali;  
praesertim in Nova Jersey prævalens, diffusa  
Torn. pl. United States I. p. 4. — *C. brevifolia*  
Pursh. Fl. Amer. T. p. 3.

1024

fructibus sessilibus refers to *Anegragi* or varia  
fructibus — latis refers to *Austriai* & *Anegragi*  
fructibus — brevibus, emarginatis refers to *Aestriai*.

But therefore is *C. terrestris*?

Torn. N. Am. St. is probably: Flora of the North & Middle Sections of the U.S.  
vol I 1824

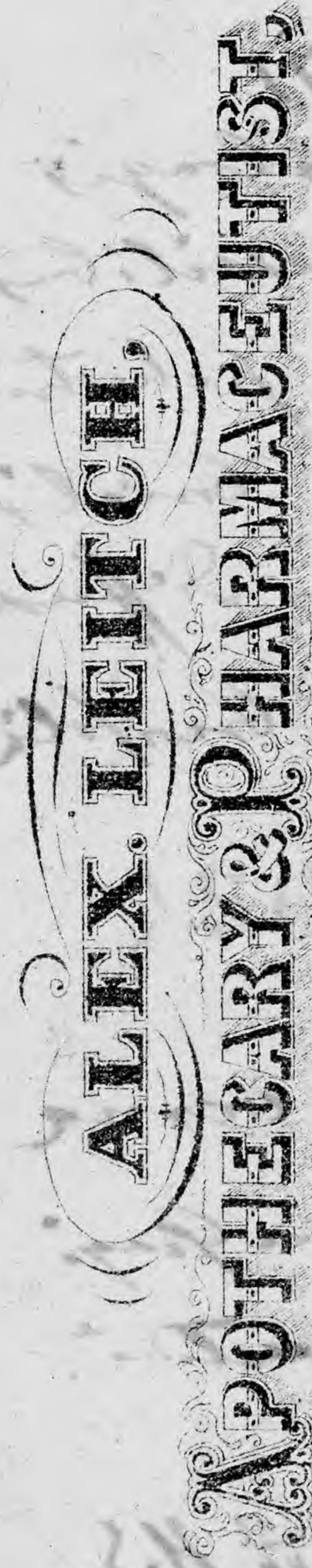


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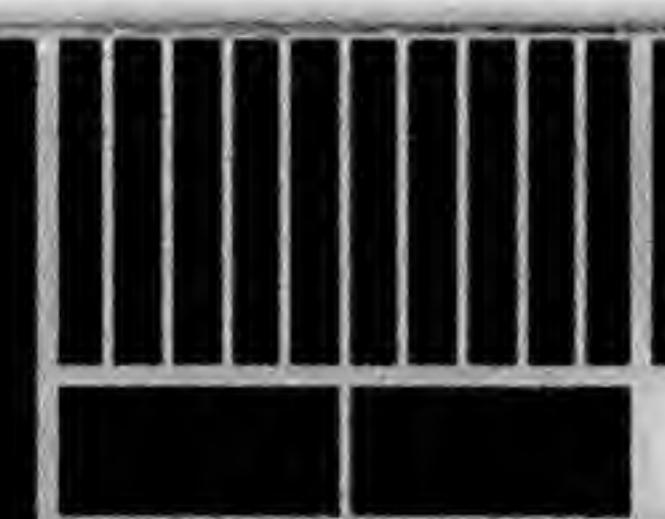


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Marble Building Cor. Fourth & Olive Sts. St. Louis, Mo.

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Calorrhagiaceae

Calotrichae

1025

A Calotrichae

a. Fructus totus compressus

Q. anguli rotundata

1. C. obtusangula Le Gall. France Belgium, Sardinia, Polynesia, Kerguelan
2. C. Asagnacii Hegelm. C. heterophylla Poir. C. linearis Poir. C. autumnalis Gray man  
St. Louis, New York, Louisiana
3. C. verna Lin. C. vernalis Kuf. C. pallens Goldb. C. ophocarpa Lendl. C. verna  
C. radicans Blaenb. C. cespitosus Schleb. C. temnista Reb (C. part.)  
C. stellata Hoff C. aestivale Thunb. C. autumnalis Sch. C. angustipolia Hoff.  
Europe - Asia - Chil. - North America to New Mexico.
4. C. hamulata Kuf. C. autumnalis Kuf. st. auct. Greece, Island, Scandinavia, Russia, through Europe to Italy & Sicilia
5. C. pedunculata DC western & Southern Europe
6. C. occidentalis Hegelm Cuba Engelhardtii Auct.
7. C. deflexa A. Nels. C. temnista DC <sup>?</sup> C. pedunculosa Gray man Rio Jauris, Arkansas, Pennsylvania
8. C. stagialis Hoff Germany, Spain, Italy, Greece, Abyssinia, India Q. anguli lata varinata  
= C. platycarpa Kuf but not? Gray man?
9. C. turposa Bert Chile
10. C. macropteryx Hegelm <sup>8. fructus lepidissime icti</sup> New Holland  
Q. Fructus super compressus, basi sternosus

11. C. drummondii Hegelm New Mexico = peplodes Mitt.

B Pseudocalotrichae

12. C. autumnalis Lin Northern Asia & Europe <sup>northern</sup> [ad Amur]
13. C. truncata Grayson Southern & Western Europe to Polynesia

see Nuttall H. Arkansas (Am. Philos. Trans. vol V. 1838. p. 140 & 141)

C. pedunculosa & C. peplodes

Terry D. Whipple <sup>1857</sup> Proc. A. S. Exp. IV. p. 135.

C. macropteryx  
C. peplodes (Lindley)



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